

**Case 3354*****Tydeus* Koch, 1836 (Acari): proposed designation of *Tydeus spathulatus* Oudemans, 1928 as the type species**

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**Abstract.** The purpose of this application, under Article 70.3 of the Code, is to propose a new type species for the genus *Tydeus* Koch, 1836, the type genus of the family TYDEIDAE. The nomenclature of this genus is uncertain because of several incorrect designations of type species and a series of misidentifications. One of the two species originally included in the genus has been misidentified, and the types of both species originally included are lost. It is proposed that *Tydeus spathulatus* Oudemans, 1928 is designated as the type species of *Tydeus* Koch, 1836.

**Keywords.** Nomenclature; taxonomy; Acari; TYDEOIDEA; TYDEIDAE; *Tydeus*; *Tydeus spathulatus*; *Tydeus croceus*; *Tydeus kochi*; tydeid mites.

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1. Koch (1836, unnumbered page) established the nominal genus *Tydeus* (Acari) to incorporate two species, *Acarus croceus* Linnaeus, 1758 and *Tydeus velox* Koch, 1836. He did not designate either species as the type.

2. Subsequently, Koch (1842, p. 70) illustrated *Tydeus mutabilis* Koch, 1838 as an example of the genus *Tydeus*. This action cannot be regarded as a valid type fixation as this species was not originally included in the genus (Article 67.2—Species eligible for type fixation) and, apart from that, the mere mention of a species as an example of a genus is not to be regarded as a type designation (Article 67.5—The term “designation”).

3. Types of the two originally included species described by Koch (1836) are lost.

4. Koch's species, *velox* and *mutabilis*, have never been recorded since their original description and are considered to be species inquirendae (Kaźmierski, 1998; André, 2005).

5. The identity of *Acarus croceus* Linnaeus, 1758 is dubious as Oudemans (1928) changed his interpretation of Linnaeus's species and referred to three different species under the name *croceus* (André, 2005). Thor (1933, p. 16) published a redescription of *Acarus croceus* Linnaeus, 1758, indicating that it is not the same as *Tydeus croceus* Koch, 1836. *Acarus croceus* Linnaeus, 1758 was subsequently designated by Oudemans (1937) as the type species of *Calotydeus* Oudemans, 1937.

6. The species identified as *Acarus croceus* Linnaeus, 1758 by Koch (1836) was misidentified. It was renamed as *Tydeus kochi* by Oudemans (1928, p. 378). Later it

was designated without any discussion as the type species of *Tydeus* by Vitzthum (1941, p. 800). Baker & Wharton (1952, p. 191) recorded *Tydeus kochi* Oudemans, 1928 as the type species of *Tydeus*. Subsequently, Baker (1970) figured *Tydeus kochi* and recorded it as the type species of the genus *Tydeus*. However, the specimens that Baker figured as *Tydeus kochi* Oudemans, 1928 differ from *Tydeus kochi* Oudemans, 1928 in the shape of the opisthosomal setae. Currently, there are no specimens of *Tydeus kochi* in Oudemans's collection housed in Leiden, and the identity of this species is uncertain. Specimens figured by Baker (1970) as *Tydeus kochi* Oudemans, 1928 are lost.

7. Due to this series of errors and in the absence of well-defined types, the true identity of the genus *Tydeus* is uncertain and two nomenclatural systems coexist, that of André (1980) and that of Kaźmierski (1989), which generates nomenclatural instability (Momen & Lundqvist, 1995).

8. André (2005) discussed three alternative approaches to this situation and compared the advantages and disadvantages of selection of a new type species from the list of three *Tydeus* species in Oudemans's collection (*Tydeus spathulatus* Oudemans, 1928, *A. croceus* Linnaeus, 1758 or *T. cruciatus* Oudemans, 1928). *Tydeus spathulatus* Oudemans, 1928 was considered the best choice. The type of *Tydeus spathulatus* Oudemans, 1928 is in a good state, properly housed in a well-known museum (National Museum of Natural History, Leiden, The Netherlands) and available for study. The description of *Tydeus spathulatus* given by André (2005) refers to the type specimens that Oudemans purchased from Berlese and collected from Padova in Italy. The 12 specimens originally placed on a single slide were remounted separately. André (2005) designated as lectotype the female remounted on the slide with the original label handwritten by Oudemans. The other slides with new labels contain the paralectotypes.

9. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all previous type species designations for the nominal genus *Tydeus* Koch, 1836 and to designate *Tydeus spathulatus* Oudemans, 1928 as the type species;
- (2) to place on the Official List of Generic Names in Zoology the name *Tydeus* Koch, 1836 (gender: masculine), type species by designation in (1) above *Tydeus spathulatus* Oudemans, 1928;
- (3) to place on the Official List of Specific Names in Zoology the name *spathulatus* Oudemans, 1928, as published in the binomen *Tydeus spathulatus* (specific name of the type species of *Tydeus* Koch, 1836).

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Acknowledgement of receipt of this application was published in BZN **62**: 126.

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